

5(2)

AUTHORS:

Babko, A. K., Get'man, T. Ye.

SCV/75-1-1-45/31

TITLE:

Chloride Complexes of Pentavalent Molybdenum (Khlordnyye komplekсы pyativalentnogo molibdena)

PERIODICAL:

Zhurnal neorganicheskoy khimii, 1959, Vol. 1, Nr. 3, pp 585-590 (USSR)

ABSTRACT:

The complex compounds of pentavalent molybdenum in hydrochloric acid solutions were investigated by spectrophotometric determinations in the ultraviolet and visible range. A reddish-brown complex with the absorption maximum at 295 and 395 mμ forms in < 2 n hydrochloric acid concentration. With the increase in the concentration to 4-5 n a greenish-brown complex forms with the absorption maximum at 450 and 730 mμ. At a further increase in the hydrochloric acid concentration a greenish-blue complex forms with the absorption maximum at 240 and 310 mμ. The absorption spectra of molybdenum (V) were recorded at different hydrochloric acid concentrations and are given by figures 1, 2, and 3. For the explanation of the differences between the absorption spectra and for the measurement of the optical density at $\lambda = 450$ mμ experiments were carried out in series with

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Chloride Complexes of Pentavalent Molybdenum

307/78-4-3-16/34

molybdenum (V) solutions at constant concentration of hydrochloric acid (1.5 n) and variable concentration of lithium chloride, as shown in figure 4. From these experiments it follows that the complex formation is due to the variation of the oxygen content in the coordination sphere. At constant concentration of the hydrogen ions in the case of an increase in the chlorine ionic concentration the second form of the complex is formed and in the case of a further increase in the [LiCl]-content to ~ 5.5 n the complex passes over into the third form. This transition of the complex is explained by the introduction of the chlorine ion into the coordination sphere. For the purpose of determining the composition of the chloride complex of molybdenum (V) some isomolar series of $\text{Mo}^{\text{V}}\text{-LiCl}$ were investigated in the presence of perchloric acid. The experiments confirm that the absorption spectra run parallel, measured in the range of the wave length of 350-500 $\text{m}\mu$; they are also dependent on the acidity of the solution. For the second complex form MoOCl_3 the ratio $\text{Mo}^{\text{V}} : \text{Cl}^- = 1 : 3$ was found. For the third form of the

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Chloride Complexes of Pentavalent Molybdenum

SCV/79-4-2-16/3A

complex MoOCl_5^{2-} was suggested. The values of the equilibrium constants of the three complexes were computed: reaction $\text{MoO}_2^+ + 2\text{H}^+ \rightleftharpoons \text{MoO}^{3+} + \text{H}_2\text{O}$; at a hydrogen concentration $\sim 3 \text{ n}$, $K_I = \frac{[\text{MoO}^{3+}]}{[\text{MoO}_2^+][\text{H}^+]^2} \approx 10^{-1}$. For the reaction

$\text{MoO}^{3+} + 3\text{Cl}^- \rightleftharpoons \text{MoOCl}_3$, in the case of acidity of the solution $\sim 6 \text{ n}$, $K_{II} = \frac{[\text{MoOCl}_3]}{[\text{MoO}^{3+}][\text{Cl}^-]^3} \approx 5 \cdot 10^{-3}$. For the reaction

$\text{MoO}_2^+ + 2\text{H}^+ + 3\text{Cl}^- \rightleftharpoons \text{MoOCl}_3 + \text{H}_2\text{O}$, the value

$$K_{III} = \frac{[\text{MoOCl}_3]}{[\text{MoO}_2^+][\text{H}^+]^2[\text{Cl}^-]^3} = K_I \cdot K_{II} \quad \text{There are 7 figures}$$

and 10 references, 1 of which is Soviet

Card 3/4

Chloride Complexes of Pentavalent Molybdenum

SCV/78-1-3-16/31

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk USSR
(Institute of General and Inorganic Chemistry of the Academy
of Sciences, UkrSSR)

SUBMITTED: July 2, 1957

Card 4/4

5 (3)

AUTHORS:

Babko, A. K., Get'man, T. Ye.

DDV/79-29-7-69/83

TITLE:

Investigation of the Reaction of Chromate With Diphenyl Carbazide
(Izucheniye reaktsii khromata s difenilkarbazidom)

PERIODICAL:

Zhurnal obshchey khimii, 1959, Vol 29, Nr 7, pp 2416-2420 (USSR)

ABSTRACT:

The formation of an intensely colored compound on the reaction of chromates with diphenyl carbazide (further designed as DC) is frequently used in the chemical analysis. Nevertheless, the chemism of this reaction has hitherto been vigorously discussed. Quite recently a number of new papers on this subject was published. Without dealing with the details of these papers, table 1 presents the principal data regarding methods and results obtained by various scientists. It can be seen from it that the data are contradictory. The investigations carried out by the authors (Ref 5) with respect to the reaction of the trivalent chromium with DCO in the presence of an acetate buffer solution gave the following results: the trivalent chromium reacts neither with diphenyl carbazide nor with diphenyl carbazone; the bivalent one does not react with diphenyl carbazone. The inaccurate data of a number of authors are explained by a side-process, i.e. by the formation of the above-mentioned compound

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Investigation of the Reaction of Chromate With
Diphenyl Carbazide

107/79-29-7-69/83

in the reaction of acetic acid with diphenyl carbazone, irrespective of presence or absence of chromium. In the reaction of Cr^{VI} with diphenyl carbazide a complex compound of the trivalent chromium with the colored oxidation product of diphenyl carbazide is formed. The colored reaction product of Cr^{VI} with diphenyl carbazide can be separated partially or nearly completely, according to the conditions, from chromium by extraction with isoamyl alcohol, in which connection the absorption spectrum of the solution of the colored compound does not vary. In the presence of complex-forming compounds the chromium combines with them without any loss of color of the solutions. In the presence of reduction agents added on reaction of Cr^{VI} with diphenyl carbazide no colored compound is formed. Some questions regarding the reaction mechanism of Cr^{VI} with diphenyl carbazide were discussed. There are 2 tables and 8 references, 2 of which are Soviet.

Card 2/3

Investigation of the Reaction of Chromate With
Diphenyl Carbazide

197/79-29-7-69/83

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk USSR
(Institute of General and Inorganic Chemistry of the Academy of
Sciences of the Ukrainian SSR)

SUBMITTED: May 29, 1958

Card 3/3

PLEASE I BOOK EMPLOYMENT 307/4141

Abdominal aorta 3557. Embryonic po malnutrition; still-l
Neonatal adrenoleukodystrophy; 3 children; neonatal. (Methods of Determining Abnor-
malities in Pure Forms) Marrow, 1960, all p. (Series: The Family, 12) 9, 27
copies printed.

REMARKS: This collection of articles is intended for chemists, metallurgists and engineers.

CONCLUSIONS: The articles describe the importance for identifying and determining various risk factors and their threats in pure social. Also discussed are many different epidemiological, sociological, psychological and linguistic grounds of the various risk factors of MCI partly. The authors state that these authors have been developed within the last five or six years by various social classes of individuals, and are now widely in medicine and security departments of the World Health Organization as mentioned. References: 1. *Journal of* *Neurology* 1998; 241: 1-11.

Karabekov, A.G., Russian Regulatory, O.G. Kirovsk, and I.I. Chelintseva.
Spectrochemical Method of Determining Admittance In Metals
Determined on 21 October

Schubert, A.E., Acad. Sci. USSR Div. Earth Planet. Sci.
Lett. 67: 10-11, 1980.

Tabber, A.F., and B.S. Estabate. Determination of Nitrogen Microbial Activity in Bacterial Communities

5 Hubbo, A.E., A.I., Eidersen, and C.P. Dybo. Termination of Small Quantities of Oxygen in Nitric Oxide.

Belmont, Phil; A.K. Fitch, and H.J. Simmons. Determination of Tantalum and Niobium in the Periodate Mixture

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Schubert, R. P. - Spectroscopic Determination of Nicotinamide in Urine and Salivary

Knoblauch, H., K.-G. Vagstad, L. V. Norberg, N. E. Tojvæge, T. V. Krogstad, and T. J. Norsted. Spectrochemical Method of Determining Manganese in Airborne and Lead in Metallurgical Materials.

Fig. 2. Total beta-D-glucoside, and O.Y. Diastere. Determination and isolation

Kharabakh, A.G., Dr. I. Popyriev, V.P. Gontshov, and G.K. Sazonov.

Hydrogen, and N. M. Shapiro. Determination of Formic Acid in Inductors

Chlorophyllous plants and algae. The chlorophyllous plants and algae are the primary producers of organic material in the ocean. They are the source of food for the other organisms in the food chain.

Hydrolysis and Redox Reactions. Determination of Copper in Titanium

Komarek, E. I., and E. S. Pridmore. Deterioration of small quantities of stored grain. *Food Technol.* 1966, 20: 102-103.

Vaynshteyn, L. Ye., I. I. Mikhaylov, V. V. Abramova, and V. A. Kuznetsov. Method of Spectral Determination of Free Calcium in Natural Waters.

Ботаника, Н.С. Лева-Менделеев, ин. и. Регулев и А.В. Карачев. Де-

132
Bickel, M., and A. F. Everett. 1967. Determination of Beryllium in Water by the Inductively Coupled Plasma Atomic Emission Spectrometric Method. *Water Res.* 1: 131-136.

Zakharova, N.P., and V.A. Futs. Spectral Determination of A Mixtures in Reaction.

RABKO, A.K.; GET'MAN, T.Ye.

Spectroscopic determination of small amounts of hydrogen in metallic
germanium. Trudy Kom. anal. khim. 12:36-47 '60. (MIRA 13:8)
(Germanium—Hydrogen content) (Hydrogen—Spectra)

S/078/61/006/002/005/017
B017/B054

AUTHORS: Babko, A. K., Volkova, A. I., Get'man, T. Ye.

TITLE: Crystalline Salicylate Complex Compounds of Titanium

PERIODICAL: Zhurnal neorganicheskoy khimii, 1961, Vol. 6, No. 2,
pp. 354 - 359

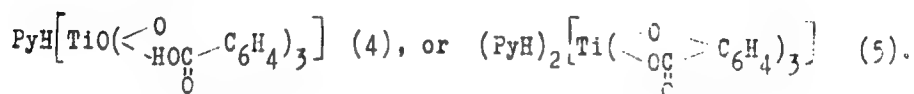
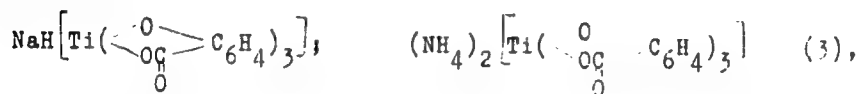
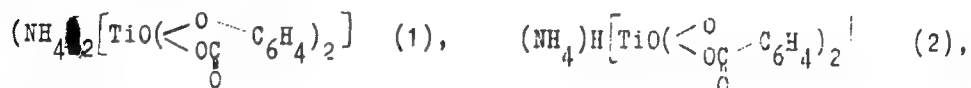
TEXT: The authors studied the composition and properties of salicylate and pyridine salicylate complexes of titanium separated from aqueous solutions in solid form. The solubility of titanium salicylate depends on the pH of the solution. Fig. 1 shows the solubility of titanium salicylate as dependent on the pH of the solution. The formation of titanium salicylate complexes from aqueous solutions proceeds stepwise. The investigation of the composition of the crystalline titanium salicylate complexes shows that the titanium salicylate ratio in these compounds in dependence on the pH of the solution is 1 : 1, 1 : 2, and 1 : 3. The pyridine salicylate complexes of titanium were produced by adding pyridine to the aqueous titanium salicylate solution, a fine crystalline yellow powder being formed in the cold, in which the ratio of components $Ti : Sal : Py = 1 : 3 : 1$,

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Crystalline Salicylate Complex Compounds
of Titanium

S/078/61/036/002/005/017
B017/B054

whereas from hot solutions a crystalline orange-colored precipitate is separated in which the ratio of components Ti : Sal : Py = 1 : 3 : 2. Titanium pyridine salicylates are extractable with chloroform. The following formulas were suggested for the structure of solid titanium salicylate complexes:



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Crystalline Salicylate Complex
Compounds of Titanium

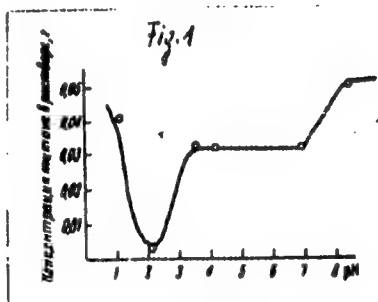
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B017/B054

There are 2 figures, 2 tables, and 8 references: 4 Soviet, 3 German, and 1 French.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry, Academy of Sciences UkrSSR)

SUBMITTED: December 28, 1959

Legend to Fig. 1: a) concentration of Ti in the solution



Card 3/3

BAEKO, A.K.; VOLKOVA, A.I.; GET'MAN, T.Ye.

Determination of the composition of strongly hydrolyzing cations.
Zhur.neorg.khim. 6 no.5:1035-1041 My '61.

(MIRA 14:4)

1. Institut obshchey i neorganicheskoy khimii AN USSR.

(Complex compounds)

BABKO, A. A.; GUTMAN, N. Ye.

Reaction of molybdate with diphenylcarbazone
diphenylcarbazone. Ukr.khim.zhur. 27 no.5 50 (Mol. 12:11)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Molybdenum compounds)

BABKO, A.K.; VOLKOVA, A.I.; GET'MAN, T.Ye.

Colored complexes of titanium with salicylate. Zhur.neorg.khim.
7 no.2:284-290 P '62. (MIRA 15:3)

1. Institut obshchey i neorganicheskoy khimii AN USSR.
(Titanium compounds) (Salicylic acid)

BABKO, A.K.; WILKOVA, A.I.; GETMAN, T.Ye.

Colorless salicylate complexes of titanium. Zhur.neorg.khim. 7
no.9:2167-2172 S '62. (MIRA 1:19)

1. Institut obshechey i neorganicheskoy khimii AN UkrSSR.
(Titanium compounds) (Salicylic acid)

BABKO, A.K., akademik; VELEKOVA, A.I.; FETIMAN, T.Ye. [Fetiman, T.I.]

Formation of a primary complex in the system Fe^{2+} - chloride-salicylate - quinine. Dop. AN URSR no. 5: 10-13 '83. (KIRA 1983)

1. AN URSR? (for Babko).

BABKO, A.K.; VOLKOVA, A.I.; GET'MAN, T.Ye.; PAVLOVA, M.Kh.

Complex formation in the system vanadyl(4) - salicylate. Ukr.khim.
zhur. 29 no.12:1235-1240 '63. (MIRA 17:2)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR i Institut
khimii Bolgarskoy Akademii nauk.

VOLKOVA, A.I.; GET'MAN, T.Ye.

Complex formation in the system vanadium (5) - salicylate. Ukr.
khim. zhur. 29 no.12:1240-1246 '63. (MIRA 17:2)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

VOLKOV, A.I.; GEL'MAN, T.Ye.

System: vanadium (V) - salicylate - organic base. Inorg. georg.
Khim. 9 no.5:1109-1116 My '64. (MIRA 17:9)

ACCESSION NR: AP4011979

S/0073/64/030/001/0102/0106

AUTHORS: Volkova, A.I.; Get'man, T.Ye.; Yemtsova, N.A.

TITLE: Determination of titanium in metallic aluminum in the form of a ternary titanium-salicylate-quinine complex

SOURCE: Ukrainskiy khimicheskiy zhurnal, v. 30, no. 1, 1964, 102-106

TOPIC TAGS: metallic aluminum, ternary titanium salicylate quinine complex, titanium determination, sodium salicylate

ABSTRACT: An earlier study was made of the salicylate complexes of titanium and the ternary salicylate complexes of titanium with pyridine, quinine and pyramidon. (A.K. Babko and A.I. Volkova, D. AN URSR, 12, (1959 1336); Zh. Anal. kh. 5 (1960 587) Ternary complexes were used to determine titanium in steel. Continuing this work, the ternary complex being formed during the reaction of titanium-salicylate acid with quinine was studied. This complex differs in that it has greater stability and is more intensively colored than salicylate complexes of titanium with other organic bases (pyridine, pyramidon etc.). The method for determining

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Card

ACCESSION NR: AP4011979

titanium is based on the formation of a colored ternary titanium-salicylate-quinine complex, which is extracted in a wide pH interval from 2.5 to 4. In studying the relationship of titanium extraction to quinine concentration, solutions with a constant concentration of TiCl_4 5.6×10^{-5} mole/liter and $[\text{NaHSal}] = 2 \times 10^{-2}$ mole/liter were prepared. Overall quinine concentration in the aqueous phase was varied from 4×10^{-5} to 5×10^{-4} mole/liter. Maximum titanium extraction was observed starting with a quinine concentration of 2×10^{-4} mole/liter. This indicates a high extraction factor of the ternary Ti complex because a one and one-half to twofold quinine surplus relative to Ti is adequate for a full extraction. Solutions containing 5.6×10^{-5} mole/liter of TiCl_4 and 1.6×10^{-4} mole/liter of quinine were prepared for studying the relationship of titanium extraction to salicylic acid concentration, and the salicylate concentration was varied from 2×10^{-4} to 6×10^{-3} mole/liter. The maximum extraction was observed with a thirty-fold sur-

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ACCESSION NR: AP4011979

plus of sodium salicylate. The extraction-photometric method was developed for determination of titanium in metallic aluminum. Sensitivity of the method is $1 \times 10^{-4}\%$. Orig. art. has: 4 figures, 2 tables.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN UkrSSR
(Institute of general and inorganic chemistry, AN UkrSSR)

SUBMITTED: 20Mar63

DATE ACQ: 14Feb64

ENCL: 00

SUB CODE: CH, EL

NO REF SOV: 004

OTHER: 000

Card 3/3

VOIKOVA, A.I.; GET'MAN, T. Ye.

Extraction-photometric method of determining quinine as a
ternary complex titanium-salicylate-quinine. Ukr. khim. zhur.
31 no. 12:1320-1322 '65 (MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
Submitted April 21, 1965.

1. GETTMAN, T. A.

2. USSR (600)

4. Agriculture

7. Soviet Union's role in the Far East. See also 'Soviet Union'.

9. Monthly List of Russian Accessions, Library of Congress, 1951 1953. Unclassified.

GET'MAN, V.P.

Surgical treatment of insufficiency of the conjunctival cavity
in anophthalmia. Uch.zap. UEIGB 5:130-146 '62 (MIRA 16:11)

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GETMAN, Ye.A.

Efficient forging of rollers. Kuz.-shtan. proizv. 1 no.2:38-39
F '59. (MIRA 12:10)

(Forging)

MANAKIN, A.M., kand.tekhn.nauk; IVANOV, N.Kh., inzh.; GET'MAN,
Ye.A., inzh.

Using chemically solidifying mixtures. Konstr.i tekhn.mash.
no.1:125-137 '61. (MIRA 15:2)
(Sand, Foundry--Additives)

LATYSHEV, S.K., insh.; VISIN, N.G., insh.; GUTMAN, Yu.V., insh.

Some conclusions derived from the testing of VL23 electric locomotives. Elek. i tepl. tiaga 4 no. 12:11-12 D '60.

(MIRA 14:1)

(Electric locomotives--Testing)

GET'MAN, Ye.A., inzh.

Automating the process of preparing cast iron with spheroidal
graphite. Lit. proizv.no.9:11-13 S '65. (MIRA 18:10)

GEI'MAN, Yu.V., inzh.

Calculation of the heating of traction motors. Sbor. trud.
DIT no 39:152-155 '63, (MIRA 18:4)

GETMAN-SYCHEVA, N. M.: Doc Med Sci (diss) -- "Material on the use of natural nitrogen-radon waters for gynecological treatment under sea conditions". Tomsk, 1958. 18 pp (Tomsk State Med Inst), 500 copies (RI, No 1, 1958, 196)

5 012/1 111, 101 3 1/1011
1111, 1111

15 2170
AUTHORS: Kaban, M. M., Corresponding Member, AS USSR, Andreyeva, I. V.,
and G. I. Znamenskaya, Yu. I.

TITLE: Emulsion polymerization of α -methyl acrolein in the presence
of various redox systems

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 14, no. 1, 1969, 1041-1044

TEXT: α -methyl acrolein was polymerized in various redox systems in the
presence of a new type of emulsifier, aqueous polyacrolein sulfite. This
yields a stable emulsion, and polymerization takes place in the absence of
the emulsifier. Polymerization is carried out in ten times the amount of
water with a dilution of twice the amount of a 2% aqueous emulsifier, all
related to the monomer used. The most suitable redox system for this system
is potassium persulfate and silver nitrate which gives high polymer yields
of maximum molecular weight. All α -methyl-acrolein polymers obtained
contain 65-70% aldehyde groups, while for polyacrolein prepared in the
same redox systems this figure is 20-70%. This is due to the methyl group
in the side chain of the α -methyl acrolein molecule, which prevents the

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Emulsion polymerization of...

01/01/61/111/001/011/011
2124, 1111

cyclizing of the hydroxyl groups, which occurs in the terminal molecule. The polymers obtained are soluble in pyridine; their intrinsic viscosity in pyridine ranges from 0.1 and 0.2, and molecular weight, determined from the coefficient of progressive diffusion and the intrinsic viscosity, is between 70,000 and 100,000. The white powders obtained could be molded at 200°C and 71 wt to light yellow plates with a softening point between 140 and 145°C. V. Ye. Eskin and S. I. Kienin are thanked for measuring the viscosity, finding the diffusion coefficient, and for calculating the molecular weights of the polymers obtained. There are 2 tables. The English-language reference is: E. Gilbert, J. Donleavy, J. Am. Chem. Soc., 80, 1117 (1958).

ASSOCIATION: Institut vysokomolekulyarnykh soedineniy Akademii nauk USSR
(Institute of High-molecular Compounds of the Academy of Sciences U.S.R.)

SUBMITTED: March 21, 1962

Card 2/2

KOTON, M.M.; ANDREYEVA, I.V.; GETMANCHUK, Yu.P.

Polymerization of meta-acrolein with anion catalysts. Dokl. AN
SSSR 155 no. 4:836-838 Ap '64. (MIRA 17:5)

1. Institut vysokomolekulyarnykh soyedineniy AN SSSR. 2. Chlen-
korrespondent AN SSSR (for Koton).

(A) L 13520-66 ENT(m)/ENT(j)/A RM

ACC NR: AP6001858

SOURCE CODE: UR/0190/65/007/012/2039/2047

AUTHORS: Koton, M. M.; Andreyeva, I. V.; Getmanchuk, Yu. P.; Madorskaya, L. Ia.; Pokrovskiy, Ye. I.; Kol'tsov, A. I.; Filatova, V. A.

ORG: Institute of High-Molecular Polymers AN SSSR (Institut vysokomolekulyarnykh soyedineniy AN SSSR)

TITLE: Structure of methacrolein polymers, obtained in the presence of anionic catalysts. 3rd report in the Series Polymerization of Acrolein and Its Derivatives

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 7, no. 12, 1965, 2039-2047

TOPIC TAGS: polymerization, polymer structure, reaction mechanism, catalyst/ Nippon Bunko infrared spectrophotometer DS 301, GNM 3 nuclear magnetic resonance spectrometer

ABSTRACT: The structure of polymers obtained from methacrolein and α -ethylacrolein in the presence of sodium naphthalene and sodium trityl using the method described by M. M. Koton, I. V. Andreyeva, and Yu. P. Getmanchuk (Dokl. AN SSSR, 155, 836, 1964) was investigated. The structure analysis was performed by chemical means: oxime formation, hydrogenation, oxidation with perbenzoic acid, ozonization, as well as by physical means: infrared spectra, using Nippon-Bunko spectrophotometer DS-301, and NMR spectra, using instrument GNM-3. It was established that the rate of conversion of methacrolein and the structure of the obtained polymer are both functions of the polymerization temperature, as illustrated in Fig. 1. Mechanism of the polymerization

Card 1/3

UDC: 678.01:53+678.744

L 13520-66

ACC NR: AP6001858

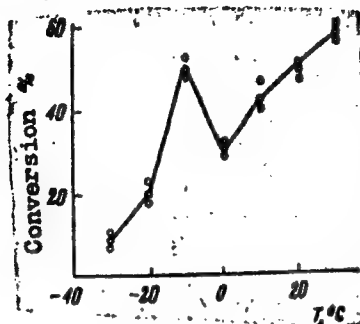
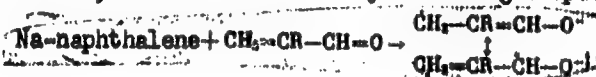
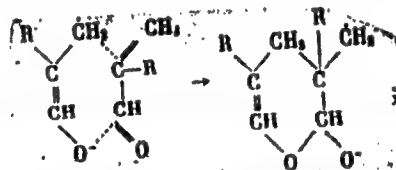


Fig. 1. Degree of methacrolein conversion to polymer within 8 hours as function of temperature. Polymerization conducted in THF in the presence of Na naphthalene (1 mol %).

reaction is offered, and is summarized by following steps: 1) initiation



2) propagation

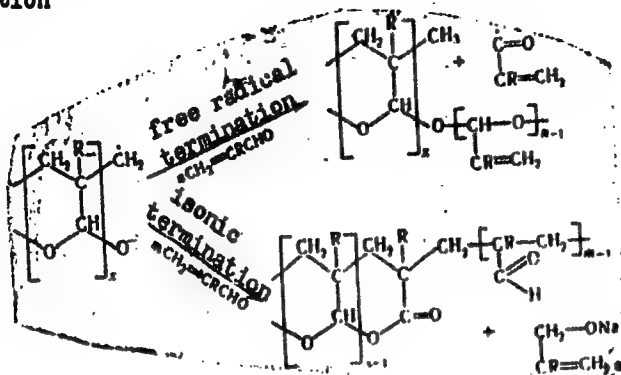


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L 13520-66

ACC NR: AP6001858

3) termination



At 0C and above, the termination step occurs mainly along the ionic path. This mechanism explains the formation of the predominantly cyclic structures consisting of condensed tetrahydropyran rings at temperatures below 0C. Orig. art. has: 3 tables, 6 figures, 4 formulas, and 3 equations.

SUB CODE: 11, 07/

SUBM DATE: 01Dec64/

ORIG REF: 005/

OTH REF: 011

Card 3/3 *OK*

L 13082-66 EWT(m)/ENP(j)/T RM

ACC NR: AP6002215

(A)

SOURCE CODE: UR/0080/65/038/012/2740/2744

AUTHOR: Andreyeva, I. V.; Koton, M. H.; Getmanchuk, Yu. P.; Tarasova, M. G.

ORG: Institute of High Molecular Compounds, AN SSSR (Institut vysokomolekulyarnykh soedineniy AN SSSR)

TITLE: Emulsion polymerization of methacrolein 1

SOURCE: Zhurnal prikladnoy khimii, v. 38, no. 12, 1965, 2740-2744

TOPIC TAGS: emulsion polymerization, methacrolein, catalytic polymerization, high polymer, polymer, acrylic plastic

ABSTRACT: Emulsion polymerization of methacrolein was studied in the presence of potassium persulfate and silver nitrate with a solution of polyacrolein bisulfite as a specific emulsifier. The object of the work was to develop a process for making a soluble polymer with high molecular weight containing reactive aldehyde groups. The optimum ratio of the monomer to water is 1:8 and the optimum polymerization temperature is 50° C. In all experiments the emulsifier content was constant (5 wt % based on the monomer). The amount of the initiator varied but the ratio of silver nitrate

Card 1/3

UDC: 678.744

L 13082-66

ACC NR: AP6002215

activator to potassium persulfate oxidative agent was 10:1. The oxygen content in the inert gas was $0.05 \cdot 10^{-2}$ to $2 \cdot 10^{-2}$ %. The characteristic viscosity of polyacrolein product increased with increasing depth of polymerization. Presence of aldehyde groups in the polymer product permits further processing into new types of plastic sheets or resin fibers. The dependence of polyacrolein characteristic viscosity upon polymerization duration is shown in Fig. 1. The effect of pH upon polymer characteristic viscosity η is shown in Fig. 2. It was found that the lower the oxygen and propionic aldehyde contaminant content, the higher was the polyacrolein molecular weight. Orig. art. has: 3 figures and 2 tables.

SUB CODE: 07,14/ SUBM DATE: 05Nov64/ ORIG REF: 004/ OTH REF: 002

Card 2/3

L 13082-66
ACC NR: AP6002215



Fig. 1. Polyacrolein characteristic viscosity η as a function of polymerization duration. A - characteristic viscosity η ; B - is polymerization duration in hours; the ratio of $K_2S_2O_8$ to $AgNO_3$ in mole %; 1 - 0.6:0.06; 2 - 0.6:0.06 (in presence of a buffer), 3 and 4 - 1.3:0.13; 5 - 2.6:

0.267.
Card 3/3

SR

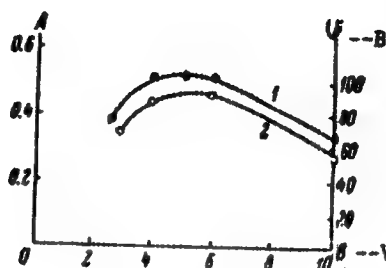


Fig. 2. The effect of solution pH on polyacrolein characteristic viscosity η and polymer yield for 6 hr polymerization and $K_2S_2O_8:AgNO_3$ ratio of 0.6:0.06 mole %.

A - η ; B - percent conversion; V - initial solution pH; 1 - polyacrolein yield in percent; 2 - polymer characteristic viscosity η .

BANDAS, A.M., doktor tekhn. nauk; GETMANENKO, G.D., inzh.

Calculation and determination of the optimal design of bias
controlled transformers and autotransformers. Trudy IILP
no. 1:5-71 '62.

GETMANN, O.D.

Three-phase transformer with horizontal core. 163.

S/035/62/000/G1C/062/123
A001/A101

AUTHORS: Getmanenko, T. V., Nikishkin, A. I.

TITLE: Results of visual observations of meteors in the Crimea

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 10, 1962, 66,
abstract 10A466 (In collection: "Ionosfer. issled. (meteory),
no. 8", M., AN SSSR, 1962, 102 - 109, English summary)

TEXT: Observations were carried out during 18 nights in August 1958 at
the Crimean meteor station of VAGO. During the indicated period of time, a group
of 5 - 9 observers recorded 4,200 meteors. The coefficient of attention and its
variations were studied. The authors present the diagram of the number of Per-
seids and luminosity function for Perseids and background meteors, as well as
the azimuth distribution of directions of sporadic meteors. There are 6 refer-
ences.

Authors' summary

[Abstracter's note: Complete translation]

Card 1/1

KOMARKOV, V.; GETMANENKO, V., starshiy master stantsii

Noninflammable cleaning solutions. Pozh.delo 5 no.7:14 Jy '59.
(MIRA 12:9)

1. Nachal'nik Novosibirskoy pozharno-ispytatel'noy stantsii
(for Komarkov)
(Cleaning compounds)

GETMANENKO, V. (Novosibirsk)

Chemical cleaning of smokehouse smokers. Pozh.delo 7 no.5:10
My '61. (MIRA 14:5)
(Novosibirsk--Smokehouses--Fires and fire prevention)

GETMANENKO, V.M.

IKHNO, A.G., kand.tekhn.nauk.; GETMANENKO, V.M., inzh.

Increasing the safety of mine electric equipment. Bezop.truda
v pron. 2 no.3:6-7 Mr '58. (MIRA 11:3)

1. Makeyevskiy nauchno-issledovatel'skiy institut po bezopasnosti
rabot v gornoy promyshlennosti.
(Electricity in mining)

GETMANENKO-MAKSIMOV, Yu. L. Cand Biol Sci -- (diss) "Certain physiological changes connected with the reproductive functions of cows ~~and depending on~~ conditions of feeding." Mos, 1957. 11 pp (All-Union Sci Res Inst of Animal Husbandry) (KL, 43-57, 87)

L 38184-66

ACC NR: AP6013816

(N)

SOURCE CODE: UR/0066/65/006/006/0005/0008

AUTHOR: Kritskiy, Ye. D.; Slyusarenko, V. I.; Kuznetsov, D. A.; Getmanets, A. I.

ORG: none

TITLE: Klimat-4 ship air conditioner

SOURCE: Kholodil'naya tekhnika, no. 6, 1965, 5-8

TOPIC TAGS: air conditioning equipment, refrigeration equipment

ABSTRACT: The Klimat-4 air conditioner is designed for year-round operation on vessels not equipped with central air conditioning systems. It controls both temperature and relative humidity and can move 1500 m³ of air an hour. The Klimat-4 consists of a cooling unit, air heater, humidifier, fan, and automatic regulator system; freon-22 is used as a coolant. A detailed breakdown of the technical parameters and a description of each component of the air conditioner are given. It is recommended for use on ships and in hospitals, kindergartens, cafes, and restaurants. Orig. art. has: 2 figures, 2 tables.

SUB CODE: 13/

SUBM DATE: none

UDC: 628.83 : 629.12

Card 1/1 vmb

VYCHEGZHANIN, A. G., nauchnyy sotrudnik; SHEYNIN, B. Ya., nauchnyy
sotrudnik; KARAMYSHEV, V. B., nauchnyy sotrudnik; GETMANETS,
I. Ya., nauchnyy sotrudnik; MANOYLENKO, S. M., vrach (Zhar'kov)

Influence of washing solutions and cooling and lubricating
liquids on the skin of machine shop workers. Vrach. delo no.6:
124-126 Ja '62. (MIRA 15:7)

(MACHINERY INDUSTRY WORKERS--DISEASES AND HYGIENE)
(SKIN--DISEASES)

SHAPIRO, D.D.; GETMANETS, I.Ya.

Changes in the immunological structure of the body following
the effect of cancerogenic chemical substances. Biol. eksp.
biol. i med. 57 no. 2:93-97 F '64. (MIRA 17:9)

1. Ukrainskiy nauchno-issledovatel'skiy institut gigiyeny
truda i professional'nykh zabolevaniy (dir. - dotsent G.I.
Yevtushenko), Khar'kov. Predstavlena deystvitel'nym chlenom
AMN SSSR N.N.Zhukovym-Verezhnikovym.

GETMANETS, Nina Aleksandrovna, agr.; SELEZNEV, N.G., red.; FULIN, L.I.,
tekhn. red.

[Sowing of certified seeds assures high crop yields] Sortovye posevy --
garantiia vysokogo urozhaiia. Tula, Tul'skoe knizhnoe izd-vo, 1960.
36 p. (MIRA 14:11)

(Field crops)

SHNEYDER, M.S., dotsent; KRASNOKUTSKAYA, T.P.; GETMANETS, R.A. (Donetsk)

Modification of the open oxygen method for determining the volume of residual air and the uniformity of pulmonary ventilation; the method of Darling, Cournand and Richards. Klin.med. no.4: 79-84, '62. (MIRA 15:5)

1. Iz kliniki propedevticheskoy terapii pediatricheskogo i sanitarno-gigiyenicheskogo fakul'tetov (zav. - prof. B.D. Borevskaya) Donetskogo meditsinskogo instituta (dir. - dotsent A.M. Ganichkin). (RESPIRATION)

GETMANETS, V.N.

Sarcoma of the pericardium. Vrach.delo no.6:647 Je '57. (MLRA 10:8)

1. Kafedra patologicheskoy anatomii Stalinskogo meditsinskogo
instituta
(PERICARDIUM--CANCER)

GETMANETS, V.N.; PARKHOMOV, I.I.; DEL'VA, V.A.

Case of actinomycosis with injury of the central nervous system.
Vrach.delo no.1:83-84 '60.
(MIRA 13:6)

1. Kafedra patologicheskoy anatomii (zav. - dotsent Ye.A. Dik-
shteyn) kafedra infektsionnykh bolezney (zav. - dotsent S.A.
Yerez) i kafedra nervnykh bolezney (zav. - prof. P.A. Miniovich)
Stalinskogo meditsinskogo instituta.
(ACTINOMYCOSIS) (NERVOUS SYSTEM--DISEASES)

GINZBURG, R.M., dotsent, GETMANIY, V.V., assistant

Clinical aspects and diagnosis of chronic dermatomyositis.
Vrach.delo no.5:529-531 Ky '58

(MIRA 11:7)

1. Kafedra fakul'tetskoy terapii (i.o.sav. - dotsent R.M. Ginzburg)
i kafedra patologicheskoy anatomii (sav. - dots. Ye.A. Dikshteyn)
Stalinskogo meditsinskogo instituta.
(MUSCLES--DISEASES)
(SKIN--DISEASES)

AUTHORS: Kruskal', M.S., and Getmanets, V.V. SOV/130-59-1-11/21

TITLE: Operation of Continuous Furnaces for Continuous Mills
(Rabota metodicheskikh pechey nepreryvnykh stanov)

PERIODICAL: Metallurg, 1959, Nr 1, pp 24-27 (USSR)

ABSTRACT: The authors discuss a 180-m² hearth area, two-zone, recuperator type continuous furnace (Fig 1) designed by Stal'proyekt, used for heating square 80 and 60 mm billets 11-12 m long for a continuous mill. The furnace is heated by 28 injection burners (Fig 2) and temperature in each zone is automatically controlled with the aid of a platinum/platinum-rhodium couple. A type EPP-120 controlling potentiometer, an IR-130 regulator and a type IMT-6/120 actuator which adjusts the valve in the burner line are used. Pressure is controlled with a type RDM-35 regulator which adjusts the flue valve. Temperatures are measured at several points. The billets are pushed through with a 42-tonne pusher with a speed of 0.18 m/sec. The authors tabulate the main characteristics of these furnaces and discuss their advantages and disadvantages. Among the defects was the construction of the charging end

Card 1/2

SOV/130-59-1-11/21
Operation of Continuous Furnaces for Continuous Mills

of the furnace and this has been rebuilt (Fig 3). Another improvement was the introduction of a compressed air injection tube into the burner which enabled the calorific value of the gas mixture to be increased to 1800 k cal/m³. The expected firing rate through ejection of hot air from the recuperators is 65×10^6 k cal/hour. The authors also suggest that the inclination of the furnace floor should be reduced from the designed value of 8° 15', and that burner design should be modified to utilize higher calorific-value gas. There are 3 figures and 1 table.

ASSOCIATION: Zavod "Krivorozhstal'" (Krivorozhstal' Works)

Card 2/2

S/130/60/000/010/009/009/XX
A006/A001

AUTHORS: Khovrin, B. V. , Getmanets, V. V.

TITLE: Operation of Roller Accessories of Merchant Mills

PERIODICAL: Metallurg, 1960, No. 11, pp. 27-30

TEXT: High efficiency of high-speed merchant or wire rolling mills depends mainly on the satisfactory operation of roller accessories and their durability. A table is given where comparative characteristics of roller accessories of domestic and foreign mills are presented. From the merchant mills enumerated the high durability of roller fixtures of one British and one American mill is noted (10,000 and 8,000 tons respectively). The fixtures are made of expensive and scarce alloying elements or alloys. A practical solution of the problem is suggested by using fixtures with rollers made of ordinary steel or cast iron such as the inlet roller box shown in Figure 1 and the delivery manipulating roller fixture of a continuous merchant mills illustrated by Figure 2. The inlet roller box consists of two guiding rulers covered by top and bottom plates. The rulers are fixed to the box frame with bolts which are simultaneously their axes. Smooth rollers are mounted into the rulers to maintain the strips of rectilinear cross section. The rollers are made of Cr 5 (ST 5) steel subjected

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Operation of Roller Accessories of Merchant Mills

S/130/60/000/010/009/009/XX
A006/A001

to subsequent quench-hardening; water-cooled textolite bearings¹ are used. The gap between the rollers is regulated by bolts; plate-shaped springs mounted underneath the regulating bolts protect the fixtures against shocks from the rolled strip and ensure the pass of the front end of the rolled stock with slight defects. The durability of the described roller box is 7,000 t. The delivery manipulating roller fixture shown in Figure 2 is characterized by the removal of the metal from the rollers by an ordinary thick-walled pipe on whose tail the manipulation head with the rollers is mounted. The pipe with the head is fixed in a special clamp mounted on the delivery beam. The necessary angle of strip tilting is produced by turning the head. St.5 rollers are mounted on friction bearings. Their position in respect to the manipulation plane is regulated by the thread of the movable axle. The gap between the rollers is modified by screws. This makes it possible to use the box for rolling of a wide range of profiles. The manipulation head is easily exchangeable. The durability of the manipulation rollers is 12,000 tons. The use of these rollers prevents the sticking of metal to the operational surface and eliminates surface defects. The high durability and cheapness of the described fixtures made of ordinary steel or cast iron can be recommended for a wide use on rolling mills.

Card 2/4

Operation of Roller Accessories of Merchant Mills

S/130/60/000/010/009/009/XX
A006/A001

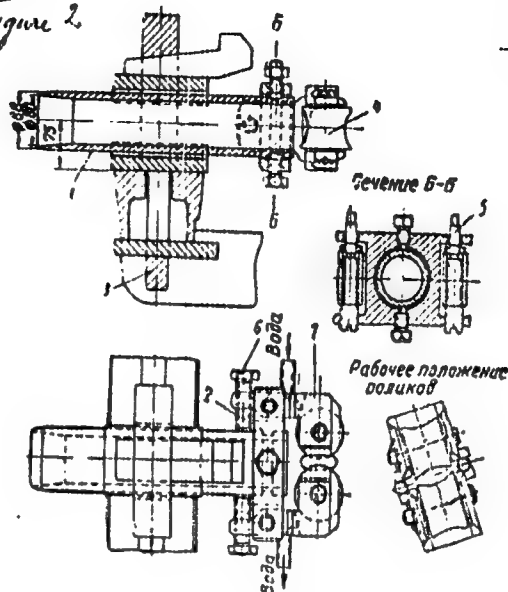
Figure 2. Delivery manipulation roller fixture of a continuous merchant mill

1 - pipe; 2 - manipulation head;
3 - clamp; 4 - rollers; 5 -
movable axle; 6 - regulating
screw; 7 - roller-holder.

There are 1 table and 2 figures.

ASSOCIATION: Krivorozhskiy metal-
lurgicheskiy zavod
(Krivoy Rog Metal-
lurgical Plant)

Figure 2.



Card 4/4

CHEKMAREV, A.P., akademik; TAYTS, N.Yu., prof., doktor tekhn.nauk;
GALATOV, N.S. inzh.; GETMANETS, V.V. inzh.; SINTOVA, T.T. inzh.

CHEKMAREV, A. P., akademik; OSTAPENKO, V. V., inzh.; BORISENKO, G. P.,
inzh.; GETMANETS, V. V., inzh.; LEVCHENKO, L. M., inzh.

Rolling of angle steel on a continuous mill. Nauch. trudy DMI
no.48:79-93 '62. (MIRA 15:10)

1. Akademiya nauk Ukrainskoy SSR (for Chekmarev).

(Rolling(Metalwork))

NEFEDOV, Anatoliy Aleksandrovich; GETMANETS, Veniamin Vasil'yevich;
MEZBORODOV, T.I., red.; LEVIT, Ye.I., red. izd-va; KARASEV, A.I.,
tekhn. red.

[Production of wire rod] Proizvodstvo katanki. Moskva,
Metallurgisdat, 1963. 251 p. (MIRA 16:6)
(Rolling (Metalwork))
(Wire industry—Equipment and supplies)

GETMANETS, V.V., inzh.; KOSTYUCHENKO, M.I., inzh.; SATSKIY, V.A., inzh.;
SINITSA, I.I., inzh.

New method of selecting a rolling technology on continuous shape
mills. Stal' 23 no.10:921-923 0 '63. (MIRA 16:11)

1. Krivorozhskiy metallurgicheskiy zavod.

TAYTS, N.Yu.; GUBINSKIY, V.I.; GETMANETS, V.V.

Temperature conditions of metal rolling on continuous small
shape and wire rod mills. Izv. vys. ucheb. zav.; Chern. met.
no. 7:147-152 '64 (MIRA 17:8)

1. Dnepropetrovskiy metallurgicheskiy institut.

GETMANETS, V.V.; ZHUTBA, S.P.

Improvement of roll bearings. Metallurg 9 no.4:37-38 Ap '64.
(MIRA 17:9)

1. Krivorozhskiy metallurgicheskiy zavod.

GETMANETS, V.V.; BRODYU, A.S.

Effect of the characteristics of an electric drive on the
technology of rolling on continuous light section mills.

Met. i gornorud. prom. no.3:34-36 My-Je '65.

(MIRA 18:11)

GETMANETS, V.V., TSYBANEV, Ye.G.; REKASICH, A.I.

Grooving the rolls of the roughing stand of hot-rolled mills.
Metallurg 10 no.10:25-28 0 1955. (2131 18:16)

1. Krivorozhskiy metallurgicheskiy zavod.

GETMANETS, Veniamin Vasil'yevich; SATSKIY, Vitaliy Antonovich,
AL'MEN, Iosif Abramovich; SHAPIRO, Mikhail Abramovich

[Operation of continuous small-section mills] Eksploata-
tatsiia nepreryvnykh melkosortnykh stanov. Moskva, Me-
tallurgiya, 1965. 142 p. (MIRA 18:11)

KOLGANOV, G.S.; PAVLENKO, I.I.; GETMANETS, Zh.S.; CHERNEGA, I.L.; SKOEKIN, M.F.

Using trays with ceramic inserts for the top pouring of steel.
Stal' 23 no.6:515-516 Je '63. (MIRA 16:10)

1. Krivorozhskiy metallurgicheskiy zavod.

GETMANOV A.
P.S.

PHASE I BOOK EXPLOITATION

304/427

Avtomaticheskoye upravleniye i vychislitel'naya tekhnika, vyp. 3 (Automatic Control and Computer Techniques, No. 3) Moscow, Mashgiz, 1960. 489 p. Errata slip inserted. 7,000 copies printed.

Ed. of Publishing House: G.F. Polyakov; Tech. Ed.: T.F. Sokolova; Managing Ed. for Literature on Machine Building and Instrument Making (Mashgiz): N.V. Pokrovskiy, Engineer; Editorial Board: V.V. Solodovnikov, Doctor of Technical Sciences, Professor (Chairman), N.N. Bogolyubov, Academician, A.Yu. Zhilinskiy, Academician, Ukrainian SSR, V.V. Kazakevich, Doctor of Technical Sciences, Professor (Deputy Chairman), A.A. Lyapunov, Doctor of Physics and Mathematics, Professor, B.N. Petrov, Corresponding Member, Academy of Sciences USSR, Ye.P. Popov, Doctor of Technical Sciences, Professor, G.S. Pospelov, Doctor of Technical Sciences, Professor, B.A. Ryabov, Doctor of Technical Sciences, Professor, B.V. Anisimov, Candidate of Technical Sciences, Docent, V.V. Petrov, Doctor of Technical Sciences, Docent, V.N. Plotnikov, Candidate of Technical Sciences, Docent (Scientific Secretary), V.B. Ushakov, Doctor of Technical Sciences.

PURPOSE: This book is intended for scientific workers, engineers, and aspirants working in the field of automatic control.

Card 1/4

Automatic Control (Cont.)

SOV/427

COVERAGE: The book is the third collection of reports read at the seminar on automatic control and computer engineering of the NTO prikladnoy tekhniki (Scientific and Technical Society for Instrument Making), the MVTU im. Baumana (Moscow Higher Technical School imeni Bauman), and the MAI im. Ordzhonikidze (Moscow "Order of Lenin" Aviation Institute imeni Ordzhonikidze). It contains papers on current topics in automatic control and computer engineering which, according to the author, are significant for the solution of problems involved in the complex automation of industrial processes by means of control machines and includes discussion of the design of linear and nonlinear automatic control systems. The book covers some questions related to the dynamics of such systems, ways of increasing operational speed, and means of obtaining optimum transient processes. Automatic control systems involving discrete computers, systems with variable parameters, sampled-data control systems, the dynamic accuracy of these systems during random motions, and the theory of sampled-data systems are discussed. No personalities are mentioned. References are found at the end of each article.

Card 2/4

Automatic Control (Cont.)

SCV 427-

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Foreword

S. I. G. Vnukov, V. V. On Control Algorithms and Control Machines for Complex Automation

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Pospelov, G.S. Sampled-Data Automatic Control Systems 11

Satmanov, A.G. Dynamic Characteristics in Performing Certain Linear Operations on a Digital Computer 88

Petrov, M.D. On the Nonstationary Properties of Sampled-Data Systems 218

Satmanov, A.S. Engineering Methods of the Linear Theory of Control Systems With Variable Parameters 233

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Automatic Control (Cont.)

SCV/427-

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Belovskiy, G.M. On a Method of Improving the Quality of a Control System by Means of Nonlinear and Computer Devices

Boyd, A.A., V.P. Poputsillo. Design of Simple Optimal Relay Systems of Second Order

Chernov, V.A., V.V. Kazakevich. Stability of Self-Oscillations of Acoustic Systems With Compressors and the Suppression of Self-Oscillations by Means of Feedbacks

AVAILABLE Library of Congress

AP/rd/427-
9/2/76

16.6800

27273
S/194/61/000/004/005/052
D249/D302

AUTHOR: Getmanov, A.G.

TITLE: The dynamical peculiarities of performing some linear operations on a digital computer

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 4, 1961, 4, abstract 4 B23 (V sb. Avtomat. upr. i vychisl. tekhn. no. 3, M., Mashgiz, 1960, 188-217)

TEXT: The application of digital computers to systems with continuous automatic control is considered. Some topics regarding the operation of computers, when realizing a certain linear operator are dealt with: 1) the conditions under which a digital computer can be considered as a continuous element of a control system are discussed; and 2) it is shown that a digital computer can perform only approximate operations of differentiation and integration. The degree of approximation depends on the method of solution, the form of the linear operation and the speed of operation from the point of view

Card 1/2

27975

S/194/61/000/004/005/052

D249/D302

The dynamical peculiarities...

of the theory of automatic control. the accuracy of approximation is determined by the frequency characteristics of the applied numerical methods of the approximate solution. A sufficiently adequate approximation of the frequency characteristics of the realising operator frequency characteristics is indicated and illustrated on examples of some simpler automatic control system sections 14 figures. 9 references. [Abstracter's note: Complete translation.]

Card 2/2

L 05275-67 EWT(8)/EWP(1) IVP(c) BB/GG
ACC NR AR6023996

SOURCE CODE: UR/0372/66/000/003/G042/G042

AUTHOR: Getmanov, A. G.; Igoshin, A. P.

TITLE: On the frequency analysis of the structures of linear functionals realizable by a digital computer in an analog-digital simulation system

SOURCE: Ref. zh. Kibernetika, Abs. 3G311 ¹⁶⁰

REF SOURCE: Sb. Analog. i analogo-tsifrovaya vychisl. tekhn. M., Mashinostroyeniye, 1965, 217-226

TOPIC TAGS: computer simulation, computer program, linear functional operator, mathematic analysis

ABSTRACT: The realization of a linear functional with a constant coefficient by means of a digital computer is discussed. The computer program is compiled in accordance with the equivalent system of difference levels. Two chief problems are formulated: selection of the method of numerical solution and selection of the step of solution assuring the desired accuracy. Bibliography of 2 titles. E. G. [Translation of abstract]

SUB CODE: 12, 09/

Card

1/1 *eqb*

UDC: 62-506:681.142:62

GETMANOV, R. inzh.-instruktor

Traffic signs and the training and practice of drivers. 2a rul.
20 no.3:24-25 Mr '62. (MIRA 15:3)
(Traffic signs and signals) (Automobile drivers)

6. Γ is a \mathbb{Q} -algebra

[illegible]

PAGE 17 (REV. 12-13-61)

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FD-1579

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On the question of the biology of sphagnum

Periodical : Izv. AN SSSR. Ser. biol. 5, 135-144, Sep-Oct 1954

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Institution : Komi Affiliate of the Academy of Sciences of the USSR, town Syktyvkar

Submitted : January 22, 1954

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(ANGIOMA, compl.

brain, causing subarachnoid hemorrh.)

(FISTULA, ARTERIOVENOUS, compl.

same)

(SUBARACHNOID HEMORRHAGE, etiol. and pathogen.

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(PERIARTERITIS NODOSA, ther.

ACTH & cortisone)

(ACTH, ther. use

periarteritis nodosa, with cortisone)

(CORTISONE, ther. use

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